

TRANSPORT & LOGISTICS

Had it with Meetings? In Aviation, more gets done with four Team Facilitations.

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Author Ralph Eckhardt died in a tragic accident in September 2019. We would like to take this opportunity to thank him for his many years of commitment at the IUBH in many events, in which he was able to inspire our students with his passion for flying and management alike. You are being missed dearly.

IUBH Discussion Papers, Reihe: Transport & Logistik, Vol. 1, Issue 3 (English Version, October 2019)

ISSN-Nummer: 2512-2797

Website: https://www.iubh.de/hochschule/publikationen/

Had it with Meetings?

In Aviation, more gets done with four Team Facilitations.

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Abstract:

The paper focuses on meetings as an over-utilized, but often under-structured tool for managerial effectiveness and efficiency. The authors present four different meeting types, more precisely termed team facilitations, as commonly used in aviation by flight crews: Brainstorming, Briefing, Decision Meeting and Debriefing. In addition, the role of a facilitator is discussed and the importance of a "Comm Cadence" (structural and communicative rules for each facilitation) is put forth. It is suggested that each facilitation be used with a specific purpose, structure, set of attendants, timing etc., and argued towards their general usefulness beyond aviation in any contemporary business setting.

Keywords:

Aviation, Aviation, Time Management, Project Management, Meetings, Leadership, Agility

JEL classification:

M10, M11, M31, N70

Meetings - a never ending story!

Problem solver, acceptance creator, information exchanger, idea generator, ritual, donor of we-feeling, conflict solver, source of conflict and last but not least time waster, power demonstrator and money destructor? Why do people in companies spend so much time together in closed, stuffy rooms? It can't be for the lukewarm coffee and stale cookies. Since Mintzberg's groundbreaking findings, many studies¹ since the end of the last century have proven that managers spend up to 70% of their time in meetings. And they have also observed an inflationary trend of meetings that take up an ever-increasing proportion of managers' time.

This may be necessary and right from the perspectives of agility, globalization, teamwork, networking or intrapreneurship - but it doesn't have to be. Since time is known to be money, the question of the benefits of meetings in the operational context is a compelling one: To what extent do meetings achieve the set goal (the question of their effectiveness), and do this with optimal use of resources (the question of their efficiency)? This question is justified because meetings are not an end in themselves, but should pursue objectives on at least two levels: business and social. The latter is secondary to the immediate operational purpose, but not unimportant or negligible. Last but not least, system theory helps us to understand the company as a complex social system, whereby meetings as interaction spaces of people also have an important function as "social glue".

However, it is well known that in the perception of managers and employees alike, meetings are usually one thing above all else: a waste of time. In other words, they have strong perceived deficits in effectiveness and efficiency. However, the problem often arises one step earlier: the goal of a meeting is not clearly defined by the inviting party and communicated in advance. The term "meeting" per se is significant in this context: it only describes that several people come together without stating concretely the purpose of the get-together in any way. An inadequate definition of a goal leads to different expectations among the participants and ultimately to the unfortunate consequence that a meeting without a clear goal cannot achieve any goal at all. This in turn can lead to conflicts and dissatisfaction among the participants and contribute to meetings being perceived negatively. One manager described this to the authors as his company's worst disease, for which he coined the fear-infusing name "Meetingitis".

In October 2017, the Harvard Business Manager Perlow/Hadley/Eun² dealt with the topic of meetings and proposed a 5-step process to improve acceptance and satisfaction with existing meetings within the organization. This is based on the collective-subjective perception of meetings within one's own organization, which can certainly make an important contribution to a successful meeting. It is a prerequisite for the achievement of objectives on the level of the above-mentioned "social glue" (see, for example, the study by Rogelberg und colleagues from 2006, which attests a strong influence of perceived meeting effectiveness on the satisfaction with one's own work situation). However, they do not answer the question of the

¹ see e.g. Oshagbemi (1995) for an overview

² See Perlow (2017)

effectiveness and efficiency of meetings, i.e. the "Why actually?" and the "How best? In this paper, we focus on this and look at the best practices from the field of Aviation.

What does Aviation have to do with Meetings?

Man is earthbound. Some courage was needed at first in order to rise into the air a little over 100 years ago. Today we count millions of take-offs and landings every year, all with the declared goal of bringing people and goods from A to B safely and reliably. Aviation made a rather adventurous start, ironically made enormous progress in the First and Second World Wars and was then commercialised in the post-war period. Today it not only provides the fastest means of transport for people and goods, but also the indisputably safest (see Fig. 1). Military aviation is based on the same principles as commercial aviation, but creates even lower error rates due to extreme specialization and other measures (see Fig. 2).

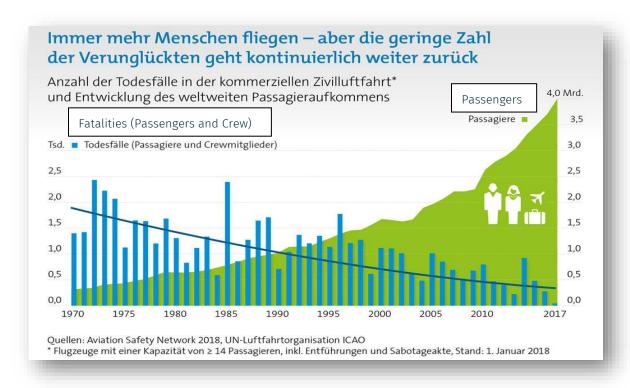


Fig. 1: The civil accident rate is just below the value of 0.4 fatalities per 100,000 flight hours.

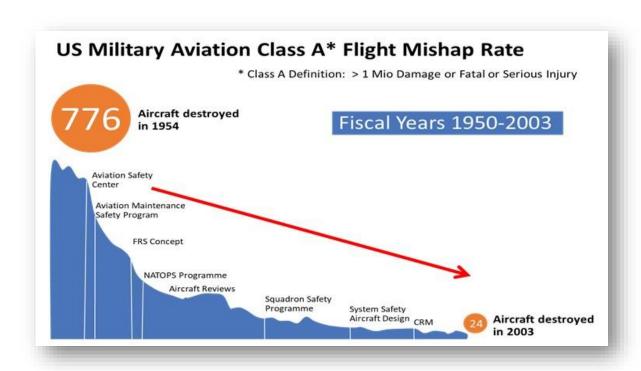


Fig. 2: The military accident rate (here: US military) is 0.15 deaths per 100,000 flight hours.

But the road to this status quo was a long and rocky one, in which airlines had to get to grips with the topic of "human error" as the number one source of flight related risk. Today, managers, as frequent flyers, get on the plane as a matter of routine and hardly notice the miracle of moving at a speed of over two football fields per second at an altitude of 12,000m at -60° C in a thin aluminum shell. Rare, rather memorable exceptions to this are, for example, an approach to Innsbruck Airport during an approaching summer thunderstorm or one in Hamburg with strong shear winds, which serve to suddenly recall the physical and technical complexity of the undertaking with a vengeance. The frequent flyer is even less aware of the fact that the team he just entrusted his life to has probably never worked together in this composition before. It met for the first time shortly before the flight. Due to rotation, vacation, illness, fluctuation and so on, it is more the exception than the rule for a large airline that a crew can fly regularly in the same composition. And this is the link between meeting and flying: four meeting types, which are more appropriately referred to as Team Facilitations, are used to ensure that cooperation is safe, effective and efficient. For crews, it is the briefing in the planning phase of the next flight that, as a type of facilitation, ensures that passengers can entrust themselves to the newly formed team.

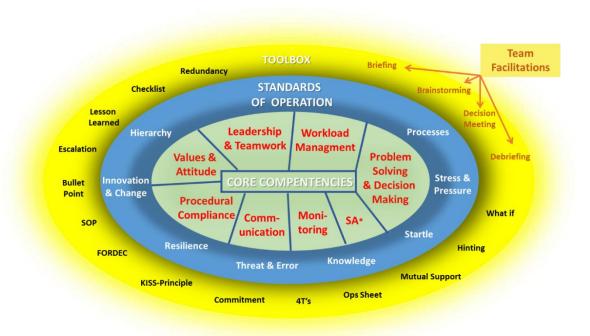


Fig. 3: Building Blocks of "Airmanship" (own figure based on ICAO Document 9995)

The tools of Team Facilitations, i.e. the targeted team interactions in (flying) practice, are part of the puzzle that leads to the so-called "Airmanship" - the culture of safe flying. Airmanship results from the combination of people with the right attitude and training (Core Competencies), the right organization (Standards of Operation) and the appropriate use of proven tools. In this Discussion Paper, we would like to focus on team facilitations as an individual component of the larger "toolbox" due to their practical relevance in operational use.

By the way, the focus on proven methods and tools from aviation is by no means entirely new: fire brigades, police and medical care institutions (so-called HROs³) have been using many functioning aviation principles and tools for years. In addition, however, they are increasingly being discovered by industrial and service companies.

³ High Reliability Organisations, whose internal interaction enables organisations to identify crises and disruptive events earlier than usual and to deal with them in a more targeted manner.

Team Facilitations

The fact is, a meeting is not always a meeting. Project phase, objectives, risk and other things determine what every meeting should be about. Team Facilitations is the generic term for internal target-oriented communication within the team: Simplify or help with something ("to facilitate"). While the goal may sometimes be that of internal exchange, it is another time about informing employees or finding solutions. Or to evaluate processes and events clearly in retrospect and to learn from them. The latter is what aviation calls "lesson-learned" communication. Which team facilitations does aviation know and use now?

The four basic types of team facilitations are brainstorming, briefing, decision meeting and debriefing. Along the well-known generic Deming management process of Plan-Do-Check-Act (PDCA), they specifically support the different phases. The first three faciliations are also well known in everyday business, but they are usually found in combination within one and the same meeting or in an incomplete form. Debriefing, on the other hand, is not actually found in business practice, with the exception of the above-mentioned HROs and rare exceptions in the context of a Critical Incident Stress Debriefing⁴. It is in debriefings where the unique opportunity lies to lead the team to a positive, learning way of dealing with human error, which can never be completely avoided. Alas, it is a black swan to almost any company.

The core point of facilitations is the underlying insight that communication and even creativity require a clear structure and rules - the right ones for every underlying purpose. Their absence creates uncertainty and distance, blocks the flow of information, distracts, costs time and finally frustrates those involved. The so-called Comm Cadence⁵ functions as the guarantor of the structure, and a team member in the role of "facilitator" is decisively responsible for compliance with rules.

A facilitator is appointed for each team facilitation, who is responsible for compliance with the basic conditions (invitation, dispatch of documents and tasks for preparation, own preparatory work, etc.), punctuality, process, moderation and the result orientation of the facilitation itself. The facilitator is not necessarily an expert, but must know how to prepare, lead and complete the facilitation, which is part of the aviation training. It is not about hierarchy; within each facilitation, the facilitator is the host and master of ceremonies, even if participants might want to proceed differently. Positive and negative feedback to the facilitator is explicitly desired, but should only be actively requested by the facilitator at the end of the event or, if necessary, offered in private.

The Comm Cadence codifies the essential rules of communication that all participants must adhere to. Similar to Table 1, it describes for each team facilitation the accepted framework conditions and procedures to be adhered to by all. It is often supported by checklists for the facilitator, which he or she can use to ensure quality in preparation, implementation and rework.

⁴ See for example McGreevy (2007)

⁵ Short for Communication Cadence

The central role of Comm Cadence is to create and stabilize a positive meeting culture. Some examples of rules in the Comm Cadence are: Team facilitations are never aimless routine events, everyone deserves careful preparation. Participants must be informed in advance of the goal, content and timeframe. A facilitator is respected, but does not necessarily have to be authorized to make decisions. You let others talk without interruption and don't become personal or insulting. Necessary aids must be available. Time is not wasted and the timeframe is not exceeded. Disturbances by mobile phone or knocking on the door are not permitted. Frequent speakers are respectfully slowed down, silent parties motivated to contribute. The principle "Ask - Listen - Clarify - Document" applies. Such rules in connection with other tools used in aviation for team facilitations contribute significantly to their acceptance and success. Figure 4 shows an example of a short Comm Cadence for a military debriefing.

Debriefing Comm Cadence:

- Facilitator prepares debriefing:
 - Invitation only to participants
 - o Indication of time, place and purpose of the debriefing
 - Preparation of documents, computer, white board, etc.
- Participants look at their own results and mistakes in advance
- Participants are on time
- Facilitator welcomes and gives brief overview of project and goal(s)
- Facilitator goes chronologically through the chain of events and asks the following questions:
 - "What went well, what went badly"?
 - "What will we do differently next time?"
 - "How will we do it differently?"
- Participants will present factual information and results
- Facilitator ensures documentation of results (lessons learned)
- Questions/feedback only when admitted (highest ranking talks at the end)

Fig. 4: Example of a military Debriefing-Comm Cadence

1st. Team Facilitation: Brainstorming (within the "P" of the PDCA-Cycle):

Brainstorming is an indispensable part of the early planning phase in particular, because here heads interact non-hierarchically and without many rules in order to generate creative and innovative solution alternatives. The facilitator first presents the goal, then makes sure that no unintentional decisions are made, alternatives are suppressed or individuals are not heard. He or she stimulates thoughts, reflects on what has already been achieved in uncreative moments and ensures sufficient breaks. Those involved are allowed to speak their part. In the end, the facilitator sums up the solutions that have been outlined. Only then, in a possible second phase, is the impossible sorted out and the possible recorded, or work packages put together and distributed. The aim is to find several solutions that are then presented to decision-makers, which ultimately lead to a decision meeting in which binding decisions are made. What is important, however, is a clear and structural separation of both team facilitations.

2nd. Team Facilitation: Briefing (within the "P" of the PDCA-Cycle):

Usually results of brainstorming and work progress are presented to decision makers in the form of a briefing. The briefing serves exclusively to pass on relevant information to a larger group of people involved. The facilitator also bears clear responsibilities here, assigning experts to the briefing where necessary. Participants and interested parties are invited to participate, but the framework is generally rather restrictive. The maximum time for a briefing is 60 minutes, as the ability to concentrate rapidly decreases and essential content can therefore be lost. Aviation speaks of "loss through fatigue".

Beginning and end are essential for briefings: Briefings begin punctually with an explanation of the goal, presentation of the content structure, followed by a rough outline ("big picture"). As a rule, documents on the subject are to be distributed in advance (and also studied by all those present!). Only now do presentations follow. The facilitator's time schedule is adhered to, complex things are explained as clearly and simply as possible, which is also part of the aviation training. At the end, the key points are summarized once again and the opportunity for questions is given. Interjections and questions are only allowed for show stoppers⁶.

3rd. Team Facilitation: Decision Meeting (within the "P" and the "D" of the PDCA-Cycle):

Decisions have to be taken at a certain point in time. In the run-up, briefings, among other things, should provide extensive intermediate information. The facilitator then invites the participants to a decision meeting, which is structurally similar to a briefing. Participants arrive punctually in the reserved room and know their targets and duration of the facilitation beforehand. Any ambiguities or questions are generally addressed and clarified in advance. The circle is narrowly limited to the facilitator, the responsible preparers of the meeting and the necessary decision-makers. This is in the interest of confidentiality, goal orientation, objectivity and openness. At the beginning of the meeting, goals and agenda will be presented, but lessons learned from previous similar events will also be reviewed. In the decision meeting, facts and expert knowledge as well as individual opinions are shared. But then decisions are made. As facilitator you take care of structure, timing and order. The

⁶ Show stoppers are potentially serious errors that can block a complete plan or a complete process.

facilitator's task does not end with the end of the decision meeting, but with the distribution of the summary of the results to all participants in writing.

4th. Team Facilitation: Debriefing (within the "C" and the "A" of the PDCA-Cycle):

At some point every project is finished, the last task is done. With a high degree of certainty, mistakes were made, not everything went as planned - so there is an opportunity to learn from mistakes. The facilitator, who must have been part of the project/task, invites you as soon as possible after completion (max. a few days). Invited to the debriefing are also only those involved in the project or mission, because this is about dealing with mistakes, problems, grievances - outsiders would probably have an inhibiting and politicizing effect.

The debriefing is "non-punitive" in its execution and its consequences for all participants. Non-punitive means without im- or explicit threat of any kind of negative consequences for the individual as long as mistakes were not made intentionally (so-called "violations"). This is an essential principle in aviation in order to ensure a positive error culture and to spread developed improvement approaches throughout the entire organization. In an orderly, preferably chronological, approach, the evaluation of events takes place. Anyone present can, if requested or in turns, freely communicate their perceptions, observations, etc., without these being discussed or commented on. In this respect, debriefing is related to brainstorming, but here it is not about generating ideas, but about collecting facts. Own mistakes are admitted fast and openly, without fear of sanctions, as long as intention is not recognizable. From the collective memories, a chronological sequence of events is worked out, root-cause analysis is carried out with various tools, and possibilities for systematic avoidance in the future are worked out. In the end, the facilitator summarises results and experiences and makes them available within the organisation, but also outside it if necessary.

Many briefing rules apply in debriefing: Punctuality, order, structure and discipline. In addition, confidentiality is important and content must not be made public. In this way, reasons for deficits and problems can be openly discussed, solutions worked out and shared as best practices in order to continuously increase quality and safety. The facilitator is solely responsible for the distribution of the lessons learned, which are always anonymous.

	Brainstorming	Briefing	Decision Meeting	Debriefing
Target(s)	Find Solutions, identify road blocks and risks	Establish same level of know- ledge (shared mental model)	Clear open questions and make decisions	Evaluate results, record good solutions, avoid mistakes in the future
Use in Aviation	Evaluation of: altitude, formation, load, weather, time, redundancy, etc.	Pre-flight information for all crews	Decision for time, crews, planes, altitude, fuel etc.	Debriefing of flight/results, lessons learned for next flights
Phase in the Deming-Cycle	P	Р	P, D	C, A
Use in Business context	Finding creative solutions + ideas, tapping knowledge in the team, exclusion of bad solutions	Project explanation/ preparation, improvement of teamwork + communication, avoidance of mis- understandings and mistakes	Making a decision, improving communication + teamwork, clarifying questions	After special events or high-stakes/high-risk projects, at the end of a day, after simulations and exercises
Number of Participants	3-8	Unlimited	2-6	Max. 12, otherwise form separate groups
Participants	Experts, critics, decision-makers, interested parties, external parties	Participants and interested parties	Preparers and decision-makers	Participants only
Duration	Max. 90 min in time intervals of up to 30 mins, breaks!	Up to 60 mins	Up to 30 mins	Max. 2 hours at intervals of up to 60 mins, breaks!
Standard Agenda	- Specify target(s) - Clarify the rules of the game (no criticism etc.) - Choose procedure (classical storming vs. brainwriting etc.) - Collect ideas from everyone present - Record (interim) results - Next Steps	- Present agenda - Project / Mission outline - Explain target(s) - lectures - queries - Next Steps	- Clarifying the goal - Presentation of project and decision alternatives - round of questions - discussion - Vote/Decision - Next Steps	- Clarify occasion and goal - Clarifying the rules of the game (especially non-punitiveness) - Present agenda - Collection of individual results - chronological reconstruction - Problem identification and analysis - Summary Lessons learned and their distribution
Infos distributed before	Optional	If possible	Yes	No
Comm Cadence	Minimal, facilitator welcomes/ends and respects that no decisions are made (yet)	Fixed order according to agenda; questions only if allowed	Opinions desired, but factual and result-oriented; no interruptions, listen until end	Fixed order according to agenda, questions only if allowed

Table 1: Overview of Team Facilitations

Do these Facilitations also fly in a business context?

Obviously, the organizational principles of aviation cannot always be transferred 1:1 to the management of companies. Some aspects of aviation are based on the standardization and training of processes and thus do not correspond to the daily working reality of every operational environment. But: Many things can be applied very well to business contexts: A product development project or project planning, for example, does not differ structurally in its challenges from the execution of a scheduled flight or a military mission: It demands creativity, discipline, teamwork, expert knowledge and above all goal-oriented communication and interaction. Especially in the aviation environment, improvisation and re-planning are a constant necessity, as weather, technology and, finally, human interaction remain unpredictable. Airmanship offers proven tools for agile work⁷, creativity, innovation and, as described, professional improvisation.

Fight the Meetingitis!

The four team facilitations should be used consciously and disciplined in the various PDCA phases of regular operations as well as in projects. Organizations can choose the five-step improvement process suggested by Perlow/Hadley/Eun to improve their meetings, while at the same time following the four basic forms of team facilitation. Whether as a company, department or team, everyone can and should formulate their own Comm Cadence within the scope of their freedom, in line with the unique organizational culture to maximize acceptance. In military and commercial flight operations, for example, briefings are not always organized and conducted in exactly the same way; they are merely based on the general principles summarized in Table 1. A medium-sized company has recently adopted a more radical approach: Here, management first abolished all interdepartmental meetings and then worked with all department heads and selected employees to develop their Comm Cadence and then completely redesign their "meetings" as Facilitations from scratch.

Example Briefing: time:matters' Huddles

time:matters was founded in 2002 as a spin-out of Lufthansa Cargo AG and specializes in same-day air freight transports in an international environment. time:matters is a service provider for many globally active companies in the logistics sector, but also from all sectors of industry. The company has grown strongly since it was founded and has internationalized its business activities. Due to the very fast and unpredictable nature of day-to-day business and for better international coordination, the management decided in 2009 to set up a new rhythm consisting of various briefings. The daily core is a briefing of the company management with the essential German and international team leaders, called "Daily Huddle". The term "Huddle" comes from American football and means a short tactical coordination of the team during a time-out. The facilitator role at time:matters changes between the participants, the 4-part agenda is completed within 15 minutes. The beginning at 11:44 a.m. is deliberately set in such a way that the time signals to the participants the need for punctuality and precision.

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⁷ "Agile programming" as a model for today's image of an agile organization is based on clearly defined rules, structures and defined roles. The role of the Scrum Master has many parallels to that of the facilitator.

Travelling participants can dial in or have to be represented by a team member. Under Agenda Point One, each participant briefly reports news from their area since the last Huddle or passes the word on. Then the key figures of the previous day are briefly reflected on (operationally and financially). Under point 3 the participants can name current problems and ask for support, problem solving is explicitly not part of the briefing. In point 4 (\$ of the day), the CFO provides the team with brief information on a significant revenue or cost development in order to sensitize them to the result target.

In addition to the Daily Huddle, there are other briefings that range from weekly to usually semi-annual and serve to provide mutual information on longer-term issues. The Comm Cadence in the Daily Huddle has been varied slightly up to its present form, and the briefing has been an integral part of the management communication of the time:matters Group for almost a decade now.

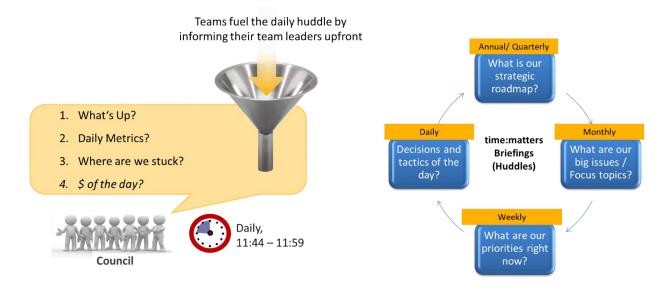


Fig. 6: Huddle-Structure at time:matters

Example Debriefing:

The MatTest GmbH⁸ operates as a German medium-sized company for material testing and quality assurance. Due to recurring quality and safety problems, the management wanted to improve the error culture and learning ability of their own company. In the opinion of the management, there was no culture of openly dealing with mistakes among the individual managers, but rather a tendency to conceal them and to look for the causes of mistakes in other departments or third parties. For this reason, management and executives took part in a joint 2-day workshop. Its core element was a joint interactive exercise on mission planning with flying background and subsequent execution in the flight simulator.

The managers first planned the mission together in distributed roles that were deliberately distributed against the existing hierarchy. Special attention was paid to the "core competencies" individual project competence, attitude and informal leadership skills. As expected, mistakes and deficits such as forgetting checklists and callouts⁹, flying in the wrong direction, too slow airspeed, leaving the planned flight altitude, silence, retreat, doubts, etc. were unavoidable in the execution of the simulator training during maneuvers, checks and communication. These were noted down by an experienced observer, processed and jointly recognized and evaluated in the subsequent debriefing. Practical solutions were sought and the results documented. The second day started with a briefing, which once again focused on the lessons learned on the first day.

This was followed by a second simulator flight, during which far fewer mistakes were made; participants completed unknown tasks more easily and routinely. Communication, but also motivation and attitude were more productive, processes were smoother. In addition to the introduction of the briefing and debriefing tools, the comparison with aviation and the systematic and non-punitive handling of faulty events led to the collective realization that this improves cooperation, motivation and results over the long term.

During the workshop, the managers agreed to test both regular and case-related (de)briefing formats in a pilot phase in particularly critical areas of cooperation. After completion of the test phase, these team facilitations were permanently established.

⁸ The name was altered.

⁹ Attention-grabbing communication in the event of an unacceptable deviation, with the aim of coordinating the crew and improving situational awareness.

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